1		1	00/121	1 INCH = 1000		
PERIOD.	FORMATION NAME.	SYMBOL.	COLUMNAR SECTION.	THICKNESS IN FEET.	CHARACTER OF ROCKS.	
EOCENE	Nussbaum formation.	Nn	\$60788::08::05.74.15	30-50	Sandstone and conglomerate capping low mesas.	
N N	Cuchara formation.	Ech		450-500	Thick-bedded cavernous sandstone of white, yellowish pale-pink tints. Brownish-red clay at base.	
EOCENE?	Poison Canyon formation	Epc	00 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	2000 - 2500	Thick beds of loosely cemented sandstone and conglomera alternating with beds of greenish-yellow clay. Contai petrified wood.  Coarse porous sandstone weathering pale-yellow dappl with pink. Surface cavernous.	
	Laramie formation.	KI		1000-1500	Alternating beds of gray sandstone and shale. Conta workable seams of coal.	
	Trinidad formation.	Ktd		160-165	Massive sandstone with fucoids ( <i>Halymenites</i> ), become shally below and containing baculites.	
CRETACEOUS	Pierre shale.	Кр		1750-1900	Yellowish and greenish-gray shale.  Lead-gray shale with lime-iron concretions arranged para with the bedding.  Chiefly gray and dark-gray shale.  Light-gray shale locally dark-gray and nearly black.	
	Apishapa formation.	Ka		450 - 500	Thin bands of limestone near the top. Bituminous s shale near the middle. Paper shale at the base.	
	Timpas formation.	" Kt		180-200	Calcareous shale with thick bed of limestone at the base.	
	Carlile shale.	Kcr		170-180	Gray shale capped by yellow sandstone.  Thin-bedded limestone with shale partings.	
	Greenhorn limestone.	Kgn		30-40 $200-210$	Thin-bedded limestone with snale partings.  Gray and dark shale with concretions.	
	Graneros shale.  Dakota sandstone.	Kgs		350-400	Fine-grained sandstone and bed of fire clay. Coarse porous sandstone and conglomerate.	
JURA- TRIAS	Morrison formation.	Jm		270	Variegated shale and clay, hard, fine-grained limeston the middle, and white sandstone at the base.	
	Badito formation.	Cb	000-000	200	Brick-red sandstone above, reddish, coarse conglomerate b	
ARCHEAN CARB.	Granite and schist.	ÆRs			Schists containing hornblende, mica, chlorite, garnet, epidote; with coarse granite and pegmatite.	

TABLE	OF	<b>FORMA</b>	TION	NAMES.

PERIOD.	Names and Symbols used in this Folio.		NAMES USED BY VARIOUS AUTHORS.	G. K. GILBERT: SEVENTEENTH ANNUAL REPORT U. S. GEOLOGICAL SURVEY, 1896.	WHITMAN CROSS: PIKES PEAK FOLIO, U. S. GEOLOGICAL SURVEY, 1894.	
NEO- CENE	Nussbaum formation. Nn		Nussbaum.	Upland sands.	,	
EOGENE?	Cuchara formation.	Ech				
Eocr	Poison Canyon formation.	Ерс				
	Laramie formation.	KI	Laramie.			
	Trinidad formation.	Ktd	Fox Hills.		Montana formation.	
	Pierre shale.	Кр	Pierre.	Pierre shale.	Montana formation.	
sac	Apishapa formation.	Ka	AT: 1	Apishapa formation.	Colorado formation.	
CRETACEOUS	Timpas formation.	Kt	Niobrara.	Timpas formation.		
CRE	Carlile shale.	Kcr		Carlile shale.		
	Greenhorn limestone.	Kgn	Benton.	Greenhorn limestone.		
	Graneros shale.	Kgs		Graneros shale.		
	Dakota sandstone.	Kd	Dakota.	Dakota sandstone.	Dakota sandstone.	
JURA- TRIAS	Morrison formation.	Jm	Morrison.	Morrison formation.	Morrison formation.	
NIF-		Cb -	Fountain.	Fountain formation (Juratrias).	Fountain formation (Carb.).	
CARBONIE- EROUS?	Badito formation.		Sangre de Cristo.			
ARCHE- (	Archean.	As	Archean.	Archean.	Archean.	

				WALSENBURG QUADRANGLE
SECTION OF ROCKS F	ROM THE	SCALE: 1 INC		WATER-BEARING DAKOTA SANDSTONE.
FORMATION NAME.	SYMBOL.	COLUMNAR SECTION.	ARTESIAN CONTOURS.	CHARACTER OF ROCKS.
			3000	Yellowish and greenish-gray shale.
			- 2800	Dark-gray shale with lenses of impure lime-stone.
			2600	
			- 2400	Lead-gray shale with lime-iron concretions containing calcite in seams and arranged parallel with the bedding.
Pierre shale.	Кр		- 2200	
			- 2000	Chiefly gray and dark gray shale.
			- 1800	
			1600	
			- 1400	Light-gray shale locally dark gray and in places nearly black.
			1200	Thin bands of limestone at intervals near the top.
Apishapa formation.	Ка		1000	Fine-grained, yellowish-brown sandy shale grading into coarsely laminated, usually bituminous, sand shale in the middle portion, becoming more finely laminated downward.
			800	Papery shale at base.  Thin bands of limestone at varying intervals
Timpas formation.	Kt		600	in gypsiferous shale.  Shale, weathering dove color, with flat concretions.  Foraminiferal limestone with large fossil shells (Inoceramus deformis).  Thin band of bituminous limestone and bed
Carlile shale.	Kcr		400	Thin band of bituminous limestone and bed of yellowish sandstone.  Gray and dark-gray shale.
Greenhorn limestone.	Kgn			Thin-bedded limestone with shale bands. Contains fossil shells (Inoceramus labiatus.)
Graneros shale.	Kgs	©=	200	Dark-gray shale, almost black in middle portion.  Contains large concretions near the base arranged parallel with bedding.
			0	Fine-grained light-gray sandstone resting on a band of shale or fire clay.  TOP OF WATER-BEARING ZONE.
Dakota sandstone.	Kd			Coarse-grained porous sandstone, often conglomeratic, with bands of shale at wide intervals.

	DETAILED SECTIONS OF LOWER	R PORTION OF LARAMIE FORMATION, SHOW SCALE: 1 INCH = 100 FEET.	ING POSITION OF COAL BEDS.	
Bore-Hole Southwest of Rouse Mine,	Bore-Hole Near Rouse.	Bore-Hole in Burnt Area South of Bear Creek.	Section of Lower Coal Group, Walsenburg.	SECTION OF LOWER COAL GROUP, PICTOU.
Coal 13".  Coal 11".  Upper coal 20", shale 8", lower coal 29".  Interval of 77' with three seams of coal aggregating 15".  Coal 38".  Coal 38".  Coal 24".  Coal 24".  Coal 6".  Coal 27".  Upper coal 21", shale 21", lower coal 12".  Upper coal 12", shale 42", lower coal 9".  Coal 28".	Coal 7".  Coal 26".  Coal 5".  Coal 16".  Coal 5".  Coal 5".  Upper coal 8", shale 40", lower coal 42".  Upper coal 7", shale 16", middle coal 16", shale 3", lower coal 33".  Coal 6".	Surface.  Interval of 217' with two seams of coal aggregating 12".  Upper coal 12", shale 7", lower coal 6".  Coal 6".  Coal 16".  Coal 17", shale 40", igneous rock 19", coke 10".  Igneous rock 15' 7".  Upper coal 30", shale 42", middle coal 18", shale 26", lower coal 20".  Coal 6".  Coal 6".  Coal 6".  Coal 40".  Coal 34".  Coal 8".  Hard coal 21".  Upper coke 39", igneous rock 10' 8", lower coke 18".	Robinson No. 2 seam 50".  Robinson seam 79".  Walsen seam in two benches, aggregating 88" of coal.	Small seam corresponding to Robinson No. 2.  Robinson seam 54".  Lennox seam in two benches, aggregating 80' of coal.
Coal 12". Coal 38". Upper coal 12", shale 3", lower coal 67".	Coal 8".  Coal 70". Rouse seam.	Coal 10".  Upper coal 16", shale 32" lower coal 48".	Small seam.  Cameron seam 40".	Coal 30".  Maitland seam 39" to 70".
Trinidad sandstone penetrated 60 feet.	Trinidad sandstone penetrated 58 feet.	Trinidad sandstone penetrated 48 feet.	Trinidad sandstone.	Trinidad sandstone.

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